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SCHOOL DESEGREGATION IN BALTIMORE.

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THE BALTIMORE CITY SCHOOLS IN 1956 ADOPTED AS SCHOOL POLICY THE SUPREME COURT DECISION ON SEGREGATION. THE PURPOSES OF THIS STUDY WERE (1) TO DESCRIBE WHAT HAS BEEN THE EFFECT OF THESE LEGAL AND ADMINISTRATIVE POLICIES AND (2) THE REASONS FOR FAILURE TO ATTAIN THE IDEALS OF THE LAW AND SCHOOL POLICY. A DESEGREGATED SCHOOL WAS DEFINED AS ONE CONTAINING AT LEAST 10 PERCENT NEGRO PUPILS AND NOT MORE THAN 90 PERCENT WHITE STUDENTS. THE METHODOLOGICAL APPROACHES USED TO ASSESS THE DESEGREGATION PROBLEMS WERE (1) SUMMARY MEASURES, (2) PERCENTAGES, (3) PATTERNS OF CHANGE, AND (4) TO LOOK AT VARIOUS UNITS (SCHOOLS, STUDENTS) AS A FOCAL POINT. BOTH THE BALTIMORE CITY AND COUNTY SCHOOL SYSTEMS HAVE MADE SOME PROGRESS TOWARD DESEGREGATION. MORE PROGRESS HAS BEEN MADE BY PLACING NEGROES IN WHITE SCHOOL ENVIRONMENTS. FEW SCHOOLS ARE LEFT IN BALTIMORE WHICH ARE STILL SEGREGATED WHITE, DUE TO PRIVATE SCHOOL (PREDOMINANTLY WHITE) AND COUNTY LINE EFFECTS ON SEGREGATION. THE FUNDAMENTAL EXPLANATION FOR SEGREGATION OF SCHOOLS IS THE SEGREGATED NEIGHBORHOOD. WHEN NEGROES OR WHITES MOVE OUT OF A DESEGREGATED NEIGHBORHOOD, THEY TEND TO BE REPLACED BY NEGROES. (ES)

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THE JOHNS HOPKINS UNIVERSITY
THE CENTER FOR THE STUDY OF SOCIAL ORGANIZATION OF SCHOOLS

School Desegregation in Baltimore

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I. INTRODUCTION

A. The Problem of School Segregation

American society has formally established, through the Supreme Court, the Congress, and the President, that school segregation is a bad thing, out of keeping with American ideals. Considerable legislative and administrative effort has been directed at reducing school segregation. Scientific studies have detailed the negative impact of segregation on minority group academic achievement. Yet the brute fact remains that most Negroes in the United States go to school mainly with other Negroes and most whites go to school mainly with other whites. So far, our formal policies and governmental activity have not appreciably changed this situation.

The Baltimore City Public School System initiated a study of the historical experience of each Baltimore City school with respect to the numbers of non-white and white students, for every year since the Supreme Court desegregation decision became the policy of the City School System. Dr. Dollie Walker tabulated these data and produced a report for the use of the school administration. With the beginning of the Center for the Study of Social Organization of Schools at Johns Hopkins, Dr. Paquin asked the Center to work with Dr. Walker in further analyses of these data.

Our purpose here is twofold. First, we want to describe in as economical a way as possible what has been happening during these eleven years--what has been the effect of these legal and administrative policies. Second, insofar as these effects fall short of the ideals set forth by the law and taken as an aim by the school administration, we want to find out as much as possible about the causes of the failure.

B. Summary of Findings

We can briefly summarize our main results as follows:

1. Both the Baltimore City System and the Baltimore County System have made some progress toward desegregation within their systems. But both systems taken together, and considered as a single "metropolitan" system have made no progress at all, by any criterion. This is because while segregation within the political boundaries has declined in importance, the City-County boundary has become the most important segregating influence in the metropolitan area. Unless integration can take place across the City-suburban boundary, neither school system by itself can appreciably affect the amount of segregation.

2. Second only in importance to the county boundary is private and parochial school segregation. Almost all of the students in private schools are white. Thus even operating within the public school system of the City to decrease segregation would have little effect, because a very large part of the whites who might go to school with Negroes are not subject to public policy because they are in private and parochial schools.

3. The progress that has been made in the City has been made entirely by introducing Negroes into previously segregated white school environments--virtually none of it involves introducing whites into Negro schools. In

addition, each year some schools which were previously desegregated become nearly all Negro. This means that the number of predominantly Negro schools never declines--it always increases.

4. In recent years, the number of schools "resegregating" to become predominantly Negro has approximately equalled the schools "desegregating" by introducing Negroes into segregated white environments. That is, the only kind of desegregation that the policy has been able to effect has been almost exactly equalled in recent years by a compensating number of schools becoming segregated. The efforts put in to get "progress" have been necessary just to stay even.

5. Further, there are very few schools left which are still segregated white in the City. That is, because of the private school and county line effects on segregation, within a few years it will be impossible for <u>any</u> City policy to achieve desegregation, because there will be no more segregated whites to mix with Negroes to produce an integrated environment.

6. All of the above forces operate more strongly on the elementary schools than on the secondary schools. That is, more Negroes go to school with whites in secondary schools than in elementary schools, and desegregation progress has been more substantial and longer lasting with secondary schools.

7. The fundamental explanation for segregation of schools is the segregation of neighborhoods. The elementary schools are almost exactly as segregated as are neighborhoods (census tracts) in the metropolitan area. Senior high schools are considerably <u>less</u> segregated than neighborhoods. That is, whatever influence the public school has on the level of segregation of social life in Baltimore (both in the City and County) is in the direction of <u>more</u> mixture than in neighborhoods. Clearly the private school system works in the direction of <u>more</u> segregation in school life than in neighborhoods.

8. One idea that has been suggested to explain the segregation of neighborhoods has to do with the schools themselves. This is the idea that there is a "tipping point," and that if the proportion Negro in a school goes over that point, the whites will flee. This is not true in Baltimore. If there are some Negroes in a school, the proportion Negro increases about 7 per cent per year, no matter what the proportion Negro was at the beginning of the year. Instead of a "tipping point," it seems that there is about the same amount of <u>demographic pressure</u> of increasing Negro school populations, which pushes about equally on <u>all</u> schools near enough to the Negro neighborhoods for the children to get there. That is, a policy of restricting the proportion Negro in desegregated schools to a certain level would not produce any substantial effect, unless the demographic pressure of Negroes is siphoned off elsewhere. The only place to siphon it off to produce desegregation is into the private and suburban school systems.

9. The fundamental source of neighborhood segregation is <u>differential net migration</u>. That is, when a Negro moves out of a desegregated neighborhood he tends to be replaced by a Negro. When a white moves out of a desegregated neighborhood, he tends to be replaced by a Negro. The net migration of whites into the metropolitan area takes place almost entirely in the suburbs, the net migration of Negroes moves almost entirely into the City. Only by capturing part of the inflow of whites, can desegregated neighborhoods remain desegregated. People move out of neighborhoods for all kinds of reasons, only one of which

is racial prejudice. But once they are on the move, apparently whites will not move into a desegregated neighborhood (and hence a desegregated school), while Negroes will.

C. Policy Implications

The general policy implications of these findings are quite clear if you want to desegregate the school system. Putting general policy recommendations into practice will, however, be very difficult, because the obstacles to integration are peculiarly difficult to control by public policy.

1. Energy directed at increasing the desegregation effort of the City School System cannot have large effects. Their quite vigorous efforts in desegregating previously segregated white schools are having little net effect, and this effect is bound to decline as the few remaining segregated whites are "used up" by encouraging Negroes to enter. The reason this vigor has not had much effect, and will have less in the future, is that the demographic pressure of the Negro community's growth creates resegregation at an equal speed as the policy produces desegregation.

2. Within the school system of the metropolitan area as a whole, there are two possible solutions. The first is the elimination of the City-County boundaries as the major segregating force in the metropolitan school system. This might be achieved in two ways. One is to open up housing in the suburbs, but to keep the school systems separate. The other is to integrate the County and City systems. This would only be feasible, we think, by constructing large educational parks near the City boundaries, and bussing City children out to them, and suburban children in. The second major influence within the metropolitan school system is the private and parochial system, whose segregating effect on Negroes is just about equal to that of the City-suburban boundary. The private schools are responsible for a very large share of the segregation within the City. The integration of these systems should be a major factor in any effective policy of desegregation. Of course, we realize that these are counsels of perfection. The City school system itself can do virtually nothing to influence the openness of the suburban and private school systems. Probably only civil rights organizations and the state and federal governments can do anything about either of these.

3. Behind the problem of school segregation, as our data show, is the problem of neighborhood segregation. And this in turn is mainly a problem of demographic pressure from the growing Negro community, and a large net migration of whites out of the City not being replaced by whites moving in from outside. Policies concerning the choice of a place to live, once a person has decided to move to the Baltimore area, can only be affected by making desegregated environments more attractive, relative to the alternatives. This is mainly a matter of changing the manner of functioning of the real estate market, and greater forces than the school system have tried to affect that market with little success.

Of course, if the schools throughout the metropolitan area were equally integrated, for instance by the construction of educational parks, then wherever in-migrating whites moved they would be moving into an integrated school situation. And if Negroes could buy into suburban neighborhoods until they were more or less evenly distributed, all in-migrating whites would be moving into integrated neighborhoods. We suspect that nothing less than one of these two alternatives will render integrated neighborhoods stable.

Short of such a thoroughgoing revolution in American ethnic relations, there are some policies that might affect somewhat the pattern of net migration, which could be carried out by the school system itself. The basic problem is to break into the realtor-client communication system, for realtors generally know nothing about the schools associated with a residence except what they can see--and they can see Negroes. The school system might engage in a systematic program to introduce true information on the quality of integrated schools into the realtor-client system. They might do this, for example, by systematically encouraging realtors to bring clients to schools for visits, by providing information on the quality of the school (the proportion of students going on to college preparatory work is probably the measure of most interest to parents), and by printing an attractive brochure on "Baltimore's Integrated Schools". These proposals are described in more detail in the report itself.

4. A final policy implication comes from the estimates we have made in the report of the educational disadvantage that Negroes suffer because of school segregation. We have estimated that the equivalent of .63 years of educational disadvantage of Negroes at the 12th grade is due to local practices of segregation (about half of it due to the private school, and almost half due to the county boundary). Compared to this, about 2.28 years of educational disadvantage would still characterize Baltimore metropolitan area Negroes even with complete desegregation of the area. Clearly from an educational point of view, compensatory education and innovations in curriculum and teaching for disadvantaged students must be the major focus of attention.

II. BALTIMORE CITY SCHOOL DESEGREGATION

One of the early decisions to be made in any analysis of desegregation is to define exactly what is meant when we speak of desegregation. Is a desegregated school one that has both races represented even though it may be only one member of the second race (Any Amount of Desegregation)? Is it a school that has at least 10 but no more than 90 per cent of its students of a second race (10% Criterion)? Is it one with between 20 and 80 per cent of a second race (20% Criterion)? Or is it some more complicated definition based on proportion of "potential" students actually enrolled in the city schools? There could be justification for the use of any one of these or various other definitions. However, there is always an element of arbitrariness in the selection of one definition. In this study, we have selected the 10% Criterion as the one on which to concentrate our attention.

A second decision to be made in any analysis is deciding the most efficient approach to assessing the problem. We can talk about the number of desegregated schools, or the number of pupils in the system going to the desegregated schools, et cetera.

What we have attempted to do in this study is to look at the desegregation problem by different methodological approaches (summary measures, percentages, patterns of change) and also to look at various units (schools, students) as a focal point. It is our intention that in doing so, we can give a clear assessment of the desegregation progress in the Baltimore City School System.

A. Segregation Indices

One method of assessing segregation in a system is to use a summary measure. Then any progress or regression would be reflected by changes in this measure. Otis D. Duncan and Beverly Duncan[1] have discussed a number of such segregation indexes used at various times in the literature. One of the more commonly used one is the dissimilarity index, "D," which indicates the proportion of either Negroes or whites who would have to be moved to a different school to achieve a racially balanced school system.

With the dissimilarity index, however, one faces the problem of how spatial limitations affect its usefulness. This index does not take into account any limitations on the redistribution of the population, and in our case we would end up with some schools having very large student bodies -- more than could possibly be accommodated -- while others would have only a fraction of their original student body. Obviously, this limitation has to be dealt with.

What we propose in this analysis of desegregation is a revision called the replacement index, "R,"[2] that does take into account the spatial distribution of our school population. However the dissimilarity index "D," has been used in a number of segregation studies,[3] and we will report it in places

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[1]Otis D. Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indexes," American Sociological Review, Vol. 20, April, 1955.

[2]See Appendix A for the derivation of the replacement index.

[3]One of the more recent ones is Karl and Alma Taeuber, Negroes in Cities, 1965.

where it might be useful to make comparisons with some of the results in the literature. In any case, the algebraic relationship of the two is a simple one which makes conversion from one index to the other an easy task.[1]

Our replacement procedure will always move an equal number of Negroes and whites, replacing a student of one race with a student of another race. In each school, we take the total number of students enrolled, regardless of racial composition, as an indication of the number of students which this school can accommodate. Taking this number as one constraint on how we redistribute our school population to achieve a balanced situation, we determine the proportion of the total school population (Negro and white combined) that this school serves. Using that proportion we then proceed by asking how many white and Negro students we need to move in order to both achieve a racial balance and keep our total in each school the same number as it originally was.

For example, if we have School A with 1,000 students and an entire school system population of 100,000 (School A has .01 of the total school population), then our procedure will achieve a racial balance in which School A will have .01 of the total Negro population in the school system and .01 of the total white population in the school system making up their student body of 1,000 -- and comparably for each school in the system. Our replacement index, "R," is the summary measure indicating what proportion of the total school population (both Negroes and whites) that would need to be moved in order to achieve a racially balanced school system while keeping the total number of students in each school fixed. One half of the students moved would be Negro, one half white.

The following table gives both the Replacement Index and the Dissimilarity Index for Baltimore City Schools from 1955 to 1965.

Table 1
Segregation Indexes for
Baltimore City School System
(1955-1965)

	R	D
1955	.45	.94
1956	.44	.90
1957	.43	.87
1958	.42	.85
1959	.43	.86
1960	.42	.84
1961	.41	.82
1962	.40	.82
1963	.40	.81
1964	.40	.82
1965	.39	.82

Observing changes in the replacement index, we see that there has been a

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[1] $R = 2D\ (N/T)\ (W/T)$ where
D = dissimilarity index
N = total number of Negro students in the system
W = total number of white students in the system
$T = N + W$

small amount of progress made toward desegregation. The proportion of students which have to change schools in order to balance the school system has decreased over the past eleven years. However, most of that progress occurred between 1955 and 1961 (R = .45 in 1955 and .41 in 1961). Since 1961, there has been only a slight decrease in the proportion of the school population which would have to change schools. From that time and continuing through the time for which we have data, it would have been necessary to move about .40 of the city students to accomplish a racially balanced school system in the City.

Of course, the polemics surrounding progress in desegregation can only partially be talked about with percentages. It is only when one talks about the impact of desegregation on the students themselves that the most important part of the problem is discussed. Although the data available in this report are limited in scope as far as dealing with the implications of segregation, we do have very good studies documenting some of the consequences of segregation. One of the most recent and worthwhile studies in this area is that of Coleman and his associates[1] based on a nationwide sample of school children. Generally their findings are what would have been predicted; however, the importance lies in these results being scientifically documented and taken out of the realm of guesswork.

The study was concerned with the performance of minority groups and the disadvantages they are under in schools throughout the nation. According to Coleman and his associates, Negroes are in more crowded classrooms, more students per teacher, than is true for white students. By the indicators used in the study, Negroes go to more inferior schools than do whites. They have access to fewer library and textbooks per student, to fewer laboratory facilities, to less varied curricula in school and fewer extracurricular activities outside of school, and are taught by less able teachers. In addition, it was found that "...the achievement of minority pupils depends more on the schools they attend than does the achievement of majority pupils."[2] This finding, coupled with the inferior schools, means that Negro students enter school with a disadvantage and this disadvantage increases as they progress through school. This was found to be the case: Negroes in the first grade, for example, had a median score of 45.4 on a verbal test and whites had a score of 53.2; however, the median score for Negroes in the 12th grade was 40.9 and for whites 52.1, showing a wider difference at the end of their school experience than was true at the beginning.

Two additional findings are worthy of attention in any report concerning integrated schools. (1) A pupil's achievemant and aspirations strongly relate to the educational backgrounds and aspirations of other students in the school. If a Negro goes to an integrated school, he is more likely to be surrounded by students with higher educational achievement than if he is segregated in schools with his own race. Thus we would expect the performance of Negroes in integrated schools to be better (with relevant background variables controlled) than Negroes in segregated schools. One thing needs to be emphasized in connection with this finding. It is not the racial composition of the school, per se, that is affecting performance but rather social characteristics such as aspirational level. (2) If a Negro feels that he has control over his own destiny, then his performance exceeds that of whites who express a feeling of lack of

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[1]James S. Coleman, et al., Equality of Educational Opportunity, U.S. Department of HEW, Washington, D. C.: U.S. Government Printing Office, 1966.

[2]Op.cit., p.22.

control. In general, fewer Negroes than whites express this control, but those Negroes in schools with a higher proportion of whites have a greater sense of control over their future.

It is only when we focus on such findings as these that we take the desegregation problem out of the legal context of achieving racially balanced schools because a law has been enacted. The really important issue is the barriers which segregation puts up by giving Negroes inferior education and thus stifling their chances in every segment of life.

B. Percentages of Students in Desegregated Schools

In this section, we will discuss the percentages of different types of schools (segregated Negro, segregated white, desegregated) and observe whether or not there has been a decrease or an increase in these types of schools at both the elementary and secondary level.

After we have classified the schools by type of racial mixture in the school, we will present the percentages of students who attend these different types of schools.

1. Elementary Level

In those cases where there has been some ambiguity concerning classification, Dr. Walker has been able to draw on her many years of experience in the Baltimore City School System and has taken the main responsibility for the classification of schools by level.

a.) Schools

The percentage of desegregated elementary schools in Baltimore City has increased since 1955. At that time 60% of all elementary schools had students of only one race (40% of the elementary schools were Negro and 20% were white schools). Most of the progress has been in eliminating all-white schools. Since 1962, there have been some 6 to 8% of the schools which were all-white schools. Because of the tremendous surge of elementary Negro students, however, there were still one third of all elementary schools having only Negro students in 1965. There has been almost no progress made with desegregating these all-Negro schools, and the percentage of elementary schools with a predominantly Negro student body has been rising. Since 1960 around 60% of all the elementary schools have been segregated schools by having a predominantly 90% or more Negro student body, and we have already indicated that about one half of these are all-Negro schools. Approximately 16 to 25%[8] of the elementary schools are segregated with a predominantly white student body.

There has been very little progress made in desegregating elementary schools since the first attempt was made. The percentage of predominantly Negro schools has steadily climbed as has the Negro population, and the attempts at desegrating these schools have not been large enough to overcome the increased

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[8]The percentage depends upon whether you designate desegrated schools as those having between 10 and 90 per cent whites or whether you use those having 20 to 80 per cent whites.

number of Negroes in the elementary schools. The disheartening fact is that a prediction must be made for a worse picture, given the present demographic trends which we discuss under Causes of Baltimore City School Segregation. If it is the young Negro who is moving into the city and producing children at a higher rate than whites and if it is the young white who is moving out of the city and hence taking his young children with him, then an increasing number of Negro children will be entering the elementary grades and a decreasing number of whites. This has certainly been true in the last eleven years.

b. Students

The following table reports the percentage of students attending desegregated elementary schools (desegregated schools means those schools with more than 10 and less than 90% whites in their student bodies):

Table 2

Percentage of Negro Elementary Students Attending Desegregated Schools (10 to 90% White) (1955-1965)

	Segregated Nonwhite Schools (0-10% White)	Desegregated Schools (11-89% White)
1955	92.5%	6.7%
1956	88.2	11.0
1957	85.8	13.0
1958	85.8	13.4
1959	82.7	16.8
1960	83.7	15.9
1961	82.4	17.3
1962	84.0	15.6
1963	83.4	16.1
1964	84.8	14.6
1965	85.5	13.8

The reason these rows do not add to 100% is that the Negro students in Segregated White schools are not reported in the table; it is the difference between the sum of the two percentages reported and 100%.

In no year were there as many as one fifth of the Negro elementary school children in a desegregated school. Almost no progress has been made in increasing the percentage of Negro elementary students going to desegregated schools. As a matter of fact, the percentages for the last two years show a decrease in elementary Negro students attending desegregated schools. In 1965, 85% of Negroes were in elementary schools that were segregated, and one half of these were in schools having total segregation.

The following table shows the percentage of white elementary students in desegregated schools:

Table 3

Percentage of White Elementary Students Attending Desegregated Schools (11 to 89 Per Cent White)

	Segregated White Schools (0-10% Negro)	Desegregated Schools (11-89% White)
1955	79.5%	20.5%
1956	71.9	28.0
1957	73.4	26.1
1958	66.5	32.6
1959	59.7	39.7
1960	60.3	38.3
1961	56.9	41.9
1962	56.8	41.6
1963	45.6	52.2
1964	56.8	41.4
1965	57.7	40.6

White elementary students are roughly twice as likely at any time as Negroes to have been in a desegregated elementary school. By the above criterion, over the years the percentage of white students in desegregated schools has approximately doubled, from 20.5% in 1955 to 40.6% in 1965.

One could look at the change in percentage of desegregated and segregated schools for this period. (Tables have not been included in the text.) The overall picture for elementary schools is one of almost no progress having been made in desegregating Negro schools: the percentage of segregated schools with a predominantly Negro student body has increased and the percentage of all-Negro schools has shown little decrease. Most of the progress was made before 1960 and has been that of desegregating white schools (see the section discussing Patterns of Change in Schools).

Even though Negroes have been distributed to desegregate white schools, the tremendous influx of Negro students at the elementary level has been enough to cause the continuation of segregated Negro schools.

Given the previous discussion of the importance of integrated schools to the performance of the Negro, the present situation is a bleak one for upgrading education for Negroes by putting them into school situations with white students. There are too few white students in the elementary schools to achieve an integrated situation. The inherent problems of moving elementary students out of their neighborhood schools will be discussed in connection with neighborhood segregation.

2. Secondary Level

There has been an increase in the percentage of Negroes in the senior high schools over the eleven years, but there has not been the dramatic increase that is found in the elementary schools. At the same time the white secondary school population has increased. Thus if the same amount of effort were put into desegregating the senior high schools, the effect would be more noticeable than at the elementary level.

a. Schools

There have been no segregated all-white senior high schools since 1961.

The percentage of all-Negro schools in the system has been very unstable, increasing and decreasing over the eleven years. It dropped to a low of 11% in 1964 but increased to 21% in 1965. There has been no progress made in changing predominantly Negro schools to desegregated ones. Again the progress has been by desegregation of the white schools. Thirty to forty per cent of all senior high schools (excluding token desegregation) are now desegregated, to be contrasted with no desegregated high schools in 1955.

b. Students

The following tables show the percentage of Negro and white students attending desegregated schools:

Table 4

Percentage Negro Senior High Students
Attending Desegregated Schools (11 to 89 Per Cent White)
(1955-1965)

	Segregated Nonwhite Schools (0-10% White)	Desegregated Schools (11-89% White)
1955	96.8%	0.0%
1956	91.6	3.0
1957	85.0	11.0
1958	77.4	19.9
1959	75.0	22.2
1960	73.0	25.8
1961	68.0	31.0
1962	63.9	34.8
1963	58.7	39.6
1964	52.7	45.1
1965	49.4	47.7

Table 5

Percentage White Senior High Students
Attending Desegregated Schools (11 to 89 Per Cent White)
(1955-1965)

	Segregated White Schools (0-10% Negro)	Desegregated Schools (11-89% White)
1955	100.0%	0.0%
1956	85.3	14.7
1957	60.2	39.8
1958	46.1	53.9
1959	43.8	56.2
1960	39.1	60.9
1961	38.0	61.9
1962	38.6	61.4
1963	39.9	60.1
1964	40.9	59.0
1965	49.5	50.2

About half of all white senior high students attend desegregated schools. This does, however, have to be qualified by the statement that the previous seven years showed an even higher percentage of white students in desegregated schools. The encouraging part of this picture is that almost one half of the Negro senior high students are in desegregated schools. Of course, this means that the other half are in schools consisting predominantly of students of their own race. The significant fact here is the difference in Negro elementary students attending desegregated schools and Negro senior high students attending desegregated schools.

C. Patterns of Change in Schools

A third way of looking at the desegregation problem is to look at what has happened to various schools over time. Since 1955, how many schools have shifted from a segregated (white or nonwhite) school to a desegregated school? Does a school stay desegregated once it has become so or does it quickly resegregate by a different race?

In this section we will look at the overall patterns which are manifest by schools changing from one type (segregated white, desegregated, segregated nonwhite) to another type in the Baltimore City School System.

Table 6 gives the aggregate figures for Baltimore City schools shifting across the boundaries we have established to identify segregated and desegregated schools. The desegregated boundary consists of those schools between 10% and 90% white with all others being segregated.

Table 6

Summary of Yearly Shifts for Baltimore City
1955-1965

	Total Schools Shifting from "Segregated" to "Desegregated"		Total Schools Shifting from "Desegregated" to "Segregated"	
	White to Deseg.	Non-White to Deseg.	Deseg. to White	Deseg. to Non-White
Total Shifts in 10 Years	53	4	9	22
Of the Total, Number of:				
Net Shifts, Old Schools	29	2	0	9
Shifts of New Schools or Closed Schools	4	1	0	2
Net Shifts from Seg. White to Seg. Non-White	10	-	-	10
Multiple Shifts Not Included in Net Figures	10	1	9	1

For example, the total shifts of schools between two school years from 90 percent or more white to between 10 and 90 percent white ("White to Deseg.") was 53 (first column, first row). Reading down the column, of these shifts, 29 were still manifested in 1965 among schools that started in 1955 as segregated white. In addition, 3 new schools that had started as white were desegregated in 1965, and one desegregated school does not appear in our 1965 data (School #208). Ten schools that had desegregated went on to be resegregated as 90 percent or more non-white. In addition, there were 10 schools that desegregated and then resegregated, or that started 1955 desegregated, then resegregated white, then desegregated again, or had some other multiple shift during the 10 years.[1]

Of all the shifts reported, 76 percent (67 out of 88) were permanent shifts. Of those permanent shifts, all but 3 were in the direction of increasing proportions of Negroes. The only important complication introduced into the previous picture of massive changes during the decade is a group of about 10 schools which bounced back and forth over the 90 percent white boundary.[2]

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[1]Schools with multiple shifts may indicate rather special equilibrium conditions, which might be studied. The schools involved are: #10, #47, #51, #62, #71, #80, #83, #98, #208, #219.

[2]A fairly typical pattern is that of School #51, which had the following yearly pattern of percentage white:

Year	% White
1955	100.0
1956	98.9
1957	91.8
1958	92.3
1959	96.4
1960	91.1
1961	88.4
1962	89.6
1963	85.3
1964	90.5
1965	91.3

Table 7

Yearly Patterns of Desegregation and Resegregation

Years	Desegregation Shifts	Resegregation Shifts	Total Shifts	Per Cent Resegregation
1955-56	11	2	13	15%
1956-57	6	1	7	14%
1957-58	6	3	9	33%
1958-59	5	0	5	0%
1959-60	2	5	7	71%
1960-61	7	1	8	12%
1961-62	1	2	3	67%
1962-63	10	5	15	33%
1963-64	5	7	12	58%
1964-65	4	5	9	56%
Total 1955-59	28	6	34	18%
Total 1960-65	29	25	54	46%

However, we can examine the yearly patterns for trends. In Table 7 we present the number of desegregation shifts, and the number of resegregation shifts, for each year.

It is perhaps most convenient to examine the last two rows of Table 7 first. The overall pattern is that during the first four years after the desegregation decision, there was a good deal of net progress toward desegregation. During the last six years, nearly the same amount of schools resegregated as desegregated, for very little net progress. The school system was in the same situation as Alice and the Red Queen in Wonderland--it had to run as fast as it could just to stay in the same place. It had almost the same rate of desegregation as in the 1955-59 period, a rate that previously had brought substantial progress. But it had stepped onto the treadmill of resegregation, and is now just keeping up.

This is illuminated in a different way if we look at the 11 schools which were desegregated for the first time in 1956. (See Table 8.) Of these 11 schools only 6 are still desegregated by our criterion. Three of these are near the 10 per cent boundary for a segregated non-white school (15.6%, 18.9%, and 19.9% white), and are likely to become resegregated in the near future.

This partly reflects the fact, of course, that these first schools to be desegregated were probably near to the growing Negro ghetto, and are now mostly firmly inside it. But the disheartening fact is that the first favorable impact of desegregation has been nearly wiped out in 8 out of 11 schools, by the pressures of resegregation.

Table 8

Proportion White in 1965 for Schools Desegregated in 1956

School #	% White 1965
2	18.9
42	7.9
65	1.0
68	58.1
70	78.4
85	0.1
90	0.3
91	15.6
214	19.0
298	6.8
407	60.0

Table 9 reports the numbers of schools, out of the 124 City schools for which we have data, which had one or another overall pattern of change during the period. For instance, there were 52 schools (for which we have data) that were less than 10 per cent white (segregated non-white) in 1955 (see total on the right, first line). Of these, only 2 had changed to desegregated schools by 1965 (These are schools #115 and 136; school 115 became desegregated between 1956 and 1957, school 136 between 1964 and 1965; in addition, one school which started in 1957, #25, and #71, which started as a segregated white school and became a segregated non-white school, desegregated by increasing numbers of whites between 1963 and 1964). The great majority of originally segregated non-white schools have remained segregated.[1] Reading in Panel B of Table 9, only 3.8 per cent of 1955 segregated non-white schools became desegregated by 1965.

The picture in the second line of Panel A is even more discouraging. Of the 15 desegregated schools in 1955, 9 have become segregated non-white schools. The pressure of overall increase in the proportion Negro in the City has driven

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[1] Schools # 100, 101, 102, 103, 104, 106, 107, 108, 109, 111, 112, 113,114, 116, 118, 119, 120, 121, 122, 125, 126, 128, 129, 130, 132, 133, 135, 137, 138, 139, 140, 141, 142, 143, 144, 146, 148, 156, 159, 160, 161, 162, 181, 182, 183, 450, 451, 452, 453, 454.

out 60 per cent of the few bright spots in the 1955 picture. Only 6 schools have remained desegregated throughout the period.[1]

Table 9

Patterns of Change in Baltimore City Schools
Between 1955 and 1965

Number of Schools by Segregation in 1955 and 1965

(Panel A)

1965

Type of School

1955 Type of School	Seg. NW[a]	Deseg.[b]	Seg. White[c]	Total
Seg. NW[a]	50	2	0	(52)
Deseg.[b]	9	6	0	(15)
Seg. W[c]	10	29	18	(57)
Total	(69)	(37)	(18)	(124)

a. Less than 10 per cent white
b. 11 - 89 per cent white
c. More than 90 per cent white

Percentage of Schools by Segregation in 1965,
of Those in Given Segregation Categories in 1955

(Panel B)

1965

1955 Type of School	Seg. NW[a]	Deseg.[b]	Seg. White[c]	Base
Seg. NW[a]	96.2%	3.8%	-	100% =52
Deseg.[b]	60.0%	40.0%	-	100% =15
Seg. W[c]	17.5%	50.9%	31.6%	100% =57

a. Less than 10 per cent white
b. 11 - 89 per cent white
c. More than 90 percent white

[1]The stably desegregated schools were #10, 13, 27, 32, 53, 225; the schools which retrogressed to become segregated non-white were #14, 20, 37, 60, 61, 63, 74, 87, 99. It would be useful to study the differences between these two groups of schools, to see more exactly what conditions facilitate preserving desegregated schooling in those schools where it has been preserved.

The only place where we see substantial progress is in the last line. The segregated white schools of 1955 have been substantially desegregated. Of the 37 schools desegregated in the last period (for those for which we have 1955 data) 29, or 78 per cent, have been created out of previously segregated white schools. That is, more than three fourths of all the desegregated school situations in the City are the result of introducing Negroes into previously segregated white environments. To look at this another way, the change from 15 schools in 1955 desegregated to 37 schools desegregated in 1965 took place by losing 9 to segregated non-white, and gaining 2, for a net loss of 7, but gaining 29 and losing none to segregated white.[1]

On the other hand, during the ten year period, 10 schools were desegregated then resegregated. They started off with more than 90 per cent white, and ended with less than 10 per cent white.[2]

The only remaining reserve of segregated white schools that the City system can use to make the only kind of progress they have been making toward desegregation are the 18 remaining all-white schools (and whatever segregated white schools we did not have data on for both years). They have taken 68.4 per cent out of this pool already, and have not added to it. There remained 18 schools as potential targets for desegregation efforts of the kind that have accounted for progress in the past. Given this small pool, there is relatively little hope that past policies limited by the City boundary will amount to much.[3]

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[1] These 29 were schools #2, 3, 9, 22, 34, 43, 44, 46, 48, 49, 50, 68, 70, 71, 72, 91, 203, 212, 213, 214, 218, 221, 223, 294, 296, 404, 406, 407, 408. School 71 passed through a segregated non-white period in 1962 and 1963.

[2] Schools # 18, 42, 59, 64, 65, 69, 85, 88, 90, 298.

[3] These schools are #6, 23, 33, 41, 47, 51, 55, 56, 76, 83, 84, 92, 98, 211, 215, 220, 403, 410.

III. BALTIMORE COUNTY SCHOOL DESEGREGATION

There has been a growing tendency for the population in the central cities in the United States to have an increasingly larger percentage of Negroes. This has been because of Negro migration into the cities, higher Negro birth rates, and migration of whites out of the city into the surrounding suburbs. Because of the impact which these migration patterns have on the school systems in both the surrounding counties and the central city, we will include data from the Baltimore County School System in our report.

Indeed the problem has grown from one of neighborhoods defining the lines of segregation to one of city-county lines defining the boundaries of segregation. That is, segregation has become one in which the Negro school population is concentrated in the city and the white school population is concentrated in the suburbs. These migration patterns and their implications will be examined more closely under "Causes of Baltimore City School Segregation." The problem of segregated schools moves from one for the Baltimore City School System alone to one for the Metropolitan Area as a whole. By presenting the picture for the City, County, and Metropolitan Area (Baltimore City and Baltimore County combined), we should be able to present a much more realistic view of the school segregation problem.

A. Segregation Indices

The segregation inddces are reported for the Baltimore County School System in the following table. Data for 1955 on Baltimore County students (and therefore for Baltimore County and City combined) are not available.

Table 10

Segregation Indexes for Baltimore County School System
(1955-1965)

	R	D
1955	*	*
1956	.10	.91
1957	.09	.82
1958	.07	.74
1959	.07	.71
1960	.07	.70
1961	.05	.69
1962	.05	.67
1963	.05	.65
1964	.05	.63
1965	.04	.59

These figures show that desegregation in the County school system could be achieved more easily than it could in the Baltimore City System. In looking at these figures, one must keep in mind that segregation in the county has never been the acute problem that it has been in the city, because the numbers are smaller. In 1965 there were only 4% of the County's 109,000 students who were Negro, compared with Baltimore City's 61% Negro out of approximately 190,000 students. The City has faced the additional problem of a

rapidly increasing proportion of Negroes while the County population of Negro school children has shown almost no change in absolute numbers. Because their population of whites has been steadily increasing, (in 1965 it was 1½ times that in 1956), the proportion of Negro school children attending county schools has decreased. This, of course, is just the opposite of what has happened in the City, and it is an extremely relevant point in comparing the County situation with the City. If you have very few students of one race, then integrating them with a second race appears an easy task simply because shifting just a few students around will achieve an integrated situation in the schools, regardless of how much effort has or has not been put into desegregating the schools.

By our replacement procedure, even in a totally segregated situation, the maximum number of students ever having to be moved will be equal to the number of that race which constitutes the smaller number in the school system (although half of our movers would be from each race). That is, the county system simply cannot talk about integration of students that are not in its school system. A small proportion of Negroes automatically means a small integration problem regardless of how they are distributed.

This should be kept in mind when viewing the County and City data. The County, as it presently stands, has a small integration problem because it has a small proportion of Negroes; the City has a large integration problem because for the last eleven years the proportion of Negroes and whites has remained in the area which constitutes the maximum problems of integration (40:60 was the Negro to white ratio in 1955 and 60:40 in 1965). However given the present trend, Baltimore City will soon "solve" its problems in one sense: if is fast becoming an all-Negro school system and with no whites in the city to integrate with Negroes, there will be no "problem of integration" left for the City school system. However, the problem will still be there for those citizens interested in providing equal educational opportunities for all students whether they live in the County or in the City.

In 1965, .04 of the population would have had to be moved to another school to have a balanced County School System, whereas ten years earlier some .10 of the students would have had to move. It should be pointed out that in both the County and City systems, the greatest progress was made in the earlier years - before 1961 - and since that time the progress has slowed down considerably. Between 1956 and 1961, the proportion of the nonwhite Baltimore County population having to move dropped by .05. Since that time the decrease has been only..01.

B. Patterns of Change in Schools

A comparison of the results of the analysis of the City system with the Baltimore County system shows clearly that the County system does not respond to the same forces as the city system. Table 11 shows the same data as Table 9, but for the County system from 1956 to 1965 (our data on the county for 1955 are incomplete).

The essential result of Table 11 is that the County system was segregated white in 1956 (74 out of 78 dominantly white schools, or 94.9 per cent), and was still segregated white in 1965 (of these same 78 schools, 66 were segregated white, or 84.6 per cent). This overall weakness of the demographic pressure of increasing non-whites is reflected in the fact that no resegregation

has gone on. Only about an eighth of the dominantly white schools have been desegregated by increasing the proportion of Negroes in the County, as compared with over half of the dominantly white schools desegregated in the city, and an additional sixth desegregated then resegregated (See Table 9). In total, then, the City system has desegregated 68.4 per cent of its dominantly white schools in the ten year period. The County in the nine year period has desegregated 12.2 per cent of its dominantly white schools.

This difference in "progress" in the City and the County is perhaps the most marked indication of where the problem lies. The growth of the Negro public school population puts very unequal pressures on the City system and the suburban and private systems. This leads to a rapid rate of one kind of progress in the city, the virtual elimination of the segregated white school. The County has made very little progress in eliminating segregated white environments.

The cost of this progress in the City is resegregation. But the City must pay this cost because the suburbs and private schools are making virtually no progress toward desegregation.

Table 11

Number of Schools by Segregation in 1956 and 1965,
Baltimore County

(Panel A)

1965

Type of School

Type of School		Seg. NW[a]	Deseg.[b]	Seg. White[c]	Total
Seg. NW[a]		2	0	1	(3)
Deseg.[b]		0	1	0	(1)
Seg. W[c]		0	9	65	(74)
Total		(2)	(10)	(66)	(78)

a. Seg. NW = 0 - 10% White
b. Deseg. = 11 - 89% White
c. Seg. W = 90 -100% White

Table 12

Percentages of Schools by Segregation in 1965,
of Those in Given Segregation Categories in 1956,
Baltimore County

(Panel B)

1965

Type of School

			Seg. NW[a]	Deseg.[b]	Seg. White[c]	Base
1	Type	Seg.NW[a]	66.7%	-	33.3%	(3)
9	Of	Deseg.[b]	-	100%	-	(1)
5						
6	School	Seg.W[c]	-	12.2%	87.8%	(74)

IV. METROPOLITAN SCHOOL DESEGREGATION (BALTIMORE CITY & BALTIMORE COUNTY COMBINED)

The preceding discussion of segregation in Baltimore City and Baltimore County has given a clear indication that the political boundaries of City-County constitute boundaries of segregation. Any progress in desegregation in the future will necessitate treating the City-County as a Metropolitan unit rather than separately. In this section we will take a brief look at desegregation in the Metropolitan Area (Baltimore City and Baltimore County) as a whole during the period for which we have data.

A. Segregation Indices

The situation for the Metropolitan Area is much more like that for Baltimore City than for Baltimore County. (See Tables 1 and 10.) There has been virtually no progress made in achieving Metropolitan desegregation:

Table 13

Segregation Indexes for Baltimore Metropolitan Area
(Baltimore City and County Combined)
1955-1965

	R	D
1955	*	*
1956	.40	.91
1957	.39	.89
1958	.39	.88
1959	.39	.87
1960	.40	.86
1961	.40	.86
1962	.40	.86
1963	.40	.85
1964	.40	.85
1965	.40	.84

the proportion of students needing to change schools has remained almost the same for the entire period. In 1965, it would have been necessary to move .40 of the Metropolitan students in order to have a balanced Metropolitan school system, the same as it was ten years earlier. After eleven years of moving toward the goal of desegregated schools, this figure indicates that the problem is just as large for the Metropolitan Area as it was when the Supreme Court declared separate Negro and white school systems illegal. As these data show, separate school systems for Negro and white students are no longer being maintained within the City, but separate systems are being maintained within the Metropolitan area, the Negroes being mainly concentrated in the City school system and the whites in the County system.

B. Patterns of Change in Schools

The first topic to take up in the analysis of changes in segregation patterns is that of the gross population movements that have to be adapted to. No policy yet proposed to deal with segregation suggests that we should arrange to have fewer students of a given kind to deal with.

Let us look first at the overall change in segregation patterns from 1955 (or 1956) to 1965 in relation to the main politically instituted segregation boundary, that between the City and the County. See Table 14. The overall situation has three striking characteristics. First, there has been virtually no decline in the importance of the segregated non-white school. In the City, it has actually increased in importance. Second, the progress in desegregation is almost entirely concentrated in the City. Baltimore County now has a percentage going to desegregated schools less than the City achieved the year after the Supreme Court decision. Third, the progress in the City is entirely due to a radical decline, almost the elimination, of the segregated white school. From 47.9 per cent of all students in segregated white environments in 1955, the city has gone to less than a sixth in such environments. Most of the segregated white schools are in the suburbs. The City has very few white students in segregated environments to mix with Negroes. What it has, it has already mixed to an appreciable extent.

Even having made nearly maximal use of its whites to create desegregated environments, the City has retrogressed in the proportion of all its students going to the most disadvantageous type of segregated school,

Table 14

Change in Segregation Patterns, for Metropolitan Area (Baltimore City and County), and for the City and County Separately

		Percentage of All Students in		
Area	Year	Segregated Non White Schools (0-10% White)	Desegregated Schools (11-89% White	Segregated White Schools (90-100% White)
Metropolitan	1956	27.8	11.3	60.9
	1965	30.9	20.7	48.4
City	1955	43.8	8.3	47.9
	1956	43.3	18.4	38.3
	1965	53.8	30.4	15.9
County	1956	5.3	0.4	94.4
	1965	0.8	6.8	92.4

the predominantly non-white school. In short, no policy by the City system alone, however enlightened, can destroy the disadvantageous dominantly Negro school. Even with an excellent use of its whites over this ten year period to produce desegregated environments, the City system has been losing the war against segregation of Negroes. The reason this policy has failed to make a substantial impact is obvious from the figures on the County system. 92.4 per cent of the County student population go to segregated white schools. And this is out of a larger population in 1965 than it was in 1956. The whites that might be used to create desegregated environments are locked up behind the County boundary, and segregation is taking over in the City from this effect of County boundaries.

Given the pattern in the overall changes of the City and County systems discussed earlier, the overall pattern of shifts within particular schools is more or less determined: We will expect very few of the segregated non-white schools to have changed by increasing numbers of whites, but considerable change in the opposite direction. That is, not only did the overall city system change in the direction of an increasing proportion of Negroes, but also (we expect) most individual schools - if they had room - would add Negroes rather than add whites.

V. ESTIMATES OF EDUCATIONAL DISADVANTAGE OF SEGREGATION

In a study based for the Office of Education on a national sample, done by James S. Coleman and his co-workers,[1] it was shown that Negro students in predominantly Negro schools had much lower ability scores in verbal learning and mathematical competence. This was true even when the influence of family background of Negro students was statistically eliminated. The primary reason to be concerned with segregation of education is that it results in inferior education for Negroes.

In this section of the report, we will use the relationship found in the national study to estimate the educational disadvantage of Negro students in Baltimore due to segregation. In particular, we will try to sort out the estimated educational disadvantage of Negro students in Baltimore which is due to different segregating effects.

To understand what this means, consider a Negro student in a school in Baltimore City which has 70 percent Negroes in it. He would be estimated to have the educational disadvantage which corresponds to that found in the national study for Negro students in schools with 70 percent Negro. According to the national data, this would be about one "standard deviation" in his verbal ability, which amounts to about three years of schooling for students in the 12th grade.

Now his being in a school with 70 percent of Negroes can be thought of as follows. He lives in a country with about 13 percent of Negroes in the total population. Even if Negroes were completely desegregated, 13 percent of his co-students would be Negro. A corresponding part of his educational disadvantage can be thought of as holding even under complete desegregation.

He then lives in the Baltimore area, which has a higher proportion Negro than the nation as a whole. In fact, about 27 percent of the school age population of Baltimore City and Baltimore County are Negroes. 27 percent minus 13 percent is 14 percent, which can be thought of as the effect on this student of living in a metropolitan area with a high proportion Negro. This part of his segregation, and hence of his educational disadvantage, is due to the segregation of Negroes in the country as a whole into some metropolitan areas, due to historical and economic forces. No local policy of desegregation could affect this.

Then he lives in the city itself, since Negroes do not live in appreciable numbers in the County. In Baltimore City, there are about 41 percent Negroes among the school age population. Another 41 percent minus 27 percent, or 14 percent of his being in a more Negro environment can be thought of as a result of Negroes' segregation into the central city. This would disappear if Negroes were distributed in the same proportion in the City as in the County.

Then he goes to the public schools, while many of the whites in Baltimore go to private schools. In fact, about 61 percent of the public school

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[1] James S. Coleman, et al., Equality of Educational Opportunity, U.S. Department of HEW, Washington, D.C.: U.S. Government Printing Office, 1966.

population in Baltimore City are Negro. Hence 61 minus 41, or 20 percent of the school's proportion Negro can be thought of as due to the segregation caused by the private schools in Baltimore City. A corresponding part of his educational disadvantage could be eliminated if the private schools took the same proportion of the Negro population as the white.

Finally, this particular student goes to a school somewhat more predominantly Negro than the average of public schools. 70 percent minus 61 percent of his degree of Negro environment, and hence a corresponding part of his educational disadvantage, can be thought of as due to segregation within the Baltimore Public School System.

In addition to the educational deficit caused by segregation, for historical and sociological reasons Negroes have some educational disadvantage even in nearly all white environments.

Our purpose here, then, is to attribute the estimated educational disadvantage of Baltimore City and County Negro children to these different kinds of segregation, so as to assess the relative importance of different causes. By mathematical techniques explained in the appendix we can form estimates of these effects. Then we can direct our policy to the most serious causes, rather than diverting our main efforts to minor aspects of the problem.

A. Components of Educational Disadvantage: Baltimore City Negroes

Table 15 gives our estimates of the components of the average educational disadvantage of Baltimore City Negro students. It is most important to look first at the local segregation components, because these might be influenced by local policy.

Our estimates show that the two major local causes of educational disadvantage are the county boundary and the private school system (see items 6 and 7). If Negroes were not segregated from the county and from the private school system, most of the deleterious effects of local segregation would apparently disappear. Approximately .19 standard deviations of verbal ability increase, which amounts to more than one-half year of education by the 12th grade, could be expected if we could break down the exclusion of Negroes from the suburban county and from the private schools.

Only .02 of a standard deviation, or about .06 of a year (see item 8) would be the expected educational benefit of further integration of the Baltimore public schools.

Clearly the major effort in a policy sense should be directed at the integration of the city and suburban school systems, and to the integration of the private schools. Further efforts in the integration of the Baltimore City Public Schools can be expected to have a low educational yield. This is not to advocate, of course, that the Baltimore City Public Schools should be allowed to discriminate. But the major problems at the present time are evidently the suburban-city segregation, and the private-public school segregation of the metropolitan school system as a whole.

Table 15

Estimated Components of Average Educational Disadvantage: Baltimore City Negro Students

Component	Estimated Disadvantage in Standard Deviation of Verbal Ability[a]	Approximate Equivalent at 12th Grade
(1) Historical and Sociological Disadvantage of the Average Negro in an All-White School	.61	1.83
(2) Additional Disadvantage if Negroes Nationally Distributed Exactly Equally in All Schools	.07	.21
(3) Total Unrelated to Segregation, (1) + (2)	.68	2.04
(4) Due to Segregation into Baltimore Metropolitan Area	.08	.24
(5) Total Not Influenced by Local Segregation, (3) + (4)	.76	2.28
(6) Due to Segregation into Central City of Baltimore	.08	.24
(7) Due to Private School Segregation and Predominance of Negroes in Public Schools	.11	.33
(8) Due to Segregation Within Baltimore City Public Schools	.02	.06
(9) Total Estimated Disadvantage[a]	.97	2.91

a. This estimate eliminates certain effects of family background.

B. Components of Educational Disadvantage: Baltimore County Negroes

If we carry out the same analysis for Negro students in Baltimore County, quite a different picture emerges. Table 16 gives our estimates for the County. The top half of the table is, of course, identical with that of the city. But the impact of local segregation on County Negro students is opposite to that on City Negro students. Because of the segregation of Negroes into the central city, those few Negroes in the county are in a more nearly all-white environment than they would be if there were no metropolitan segregation.

This means that the effect of the county boundary on their situation is to improve it, to give them an educational advantage. These few County Negroes then derive benefits from the local segregation, by not being surrounded by a segregated, predominantly Negro environment. The advantage they derive from this, estimated at .13 standard deviations, or about .39 years at the 12th grade (see item 6.), brings them very nearly up to the level of disadvantage of Negroes in an all-white environment - the disadvantage due to historical and sociological factors. This makes sense, since as we will see later, two thirds of all county Negroes go to schools which are 80 to 100 percent white.

C. Comparison of Educational Disadvantage of City and Suburban Negro Students

The degree of educational disadvantage of Baltimore County Negro students is thus estimated to be .63 standard deviations, or about 1.89 years at the 12th grade level. (See Table 16, item (9)). That for City Negroes is estimated to be .97 standard deviations, or about 2.91 years at the 12th grade level. The estimated difference, then, is .34 standard deviations, or more than a full year of schooling.

The verbal abilities of City Negro students then, would be expected to be a full year behind those of County Negro students, controlling for family background factors. As we have seen, most of this difference is due to segregation by the county boundary and by the private school system.

The remaining estimated educational disadvantage of Negro students in Baltimore, over two years, is mostly due to item (1) in both Tables. This is a matter which is not due to local segregation; rather it is the product of historical discrimination against Negroes and its continuing psychological and educational effects. This large deficit can be attacked by compensatory education, to remedy historical educational deficiencies of the Negro group as a whole. Clearly much of our efforts must be directed at finding effective ways to remedy the historical crime done by American society to the psychological, social, and educational life of the Negro group as a whole.

Table 16

Estimated Components of Average Educational Disadvantage: Baltimore County Negro Students

Component	Estimated Disadvantage (Negative = Advantage) in Standard Deviations of Verbal Ability[a]	Approximate Years Equivalent at 12th Grade
(1) Historical and Sociological Disadvantage of the Average Negro in an All-White School	.61	1.83
(2) Additional Disadvantage if Negroes Nationally Distributed Exactly Equally in all Schools	.07	.21
(3) Total Unrelated to Segregation, (1) + (2)	.68	2.04
(4) Due to Segregation into Baltimore Metropolitan Area	.08	.24
(5) Total Not Influenced by Local Segregation, (3) + (4)	.76	2.28
(6) Due to Segregation of County from City Negroes	-.13	-.39
(7) Private School Factor	b	b
(8) Due to Segregation Within County Schools	.00	.00
(9) Total Estimated Disadvantage	.63	1.89

a. This estimate eliminates certain effects of family background.

b. The private school system does not result in Baltimore County Negroes being in predominantly Negro Schools, and is insignificant in this case. Hence it was not calculated separately but included in item (6).

VI. CAUSES OF SCHOOL SEGREGATION

Given the preceding analysis which located certain patterns of segregation that exist in the Baltimore area, we would like to concentrate in this section on some of the causes of segregation in the Baltimore City School System.

A. Political Boundaries and Migration Trends

No progress in destroying the all Negro school, in spite of the progressive policy of the City system - this is the effect of political boundaries between the school systems of the suburbs and those of the cities.

The mechanism by which this boundary has a segregating effect is that of differential migration. In any neighborhood, changing or not, a certain percentage of the people will be moving out. They get jobs elsewhere, or get enough money for a better house, or have more children or fight with their neighbors. Perhaps this out-migration is somewhat increase in "changing" neighborhoods, but this "flight" is just an exaggeration of normal out-migration. The key question then for segregation is the character of the in-migrants to the area. An area can remain stable in composition only if the in-migrants have the same composition (e.g., the same proportion Negro) as the out-migrants.

Thus a stably desegregated area is one into which both Negroes and whites are moving. The key feature of suburban-city segregation, then, is the composition of the flow of in-migrants. The central fact of our time is that white in-migrants go to the suburbs, Negro in-migrants to the central city.

By 1960 over half of all Negroes in the United States lived in the central cities of SMSA's. Of those Negroes dwelling in metropolitan areas in 1960, 80% lived in central cities.[1] In an analysis of some ten central cities, Reynolds Farley[2] suggests that it is the young whites who are continuing to leave the city and the young Negroes who are migrating into the city.

Baltimore City is no exception to this trend.[3] Between 1960 and 1966, the white population in the city declined by approximately 12% while the

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[1] Philip M. Hauser, "Demographic Factors in the Integration of the Negro," The Negro American, Talcott Parson and Kenneth Clark (eds.), Boston: Houghton Mifflin Co., 1966.

[2] Reynolds Farley, "Changes in Residential Segregation Since 1960." A paper read at the Southern Sociological Society, Atlanta, Georgia, March, 1967.

[3] The following estimates of the population of Baltimore City are from Quarterly Statistical Report, Baltimore City Health Department, Bureau of Biostatistics, Third Quarter 1966, Vol. 18, No. 3.

nonwhite population increased by almost 15%, constituting about 41% of the total population. The decrease in the white population is explained by a sizeable and continuous out-migration. The increase in the nonwhite population during the last six years has been primarily due to an excess of births over deaths with a minimum due to migration.

	Estimates for Baltimore City	
	White	Nonwhite
Estimated Net Migration (1965-1966)	-12,640	358
Estimated Population by Age (July 1, 1966)		
5 - 9 years	45,955	49,838
10-14 years	42,851	42,287
15-19 years	41,803	34,605

Some in-migrants to a particular neighborhood will have come from other areas of the metropolitan region. But the key fact about such migrants is not that they have left a neighborhood being desegregated (which they would have, in the normal course of events, anyway), but that the whites will not move into a desegregated neighborhood. Instead, they will move into the segregated suburbs if white, and into either segregated Negro or desegregated city neighborhoods if Negro. Hence over the long run, desegregated neighborhoods become resegregated Negro (as long as the net flow of in-migrants continues to the area as a whole), while the segregated white neighborhoods of suburbs grow. Thus the "net migration" to the central city is predominantly Negro, the "net migration" to the suburbs predominantly white.

Only by equalizing the racial composition of in-migrants to the suburbs and city, especially by encouraging Negroes to settle in new housing in the suburbs, can the residential segregation by the county boundary be undermined. This is not, of course, a business for the school system to undertake. If residential segregation is not broken, the only solution is the dissolution of the county-city school system boundary.

The implications for the City school system of these demographic trends are of great inport. Given these trends, the degree of segregation felt by the Negro will be intensified. It seems to be the case that whites who can afford the extra expense of moving into surrounding counties do so, and that new white immigrants to the area enter the suburbs. These are families of better socioeconomic standing. There are two consequences from this net exit of whites, consequences the Baltimore City school system and more generally our society can ill afford: (1) The intensity of segregation increases for the Negro. He is already at a disadvantage because of his race,[1] and this disadvantage increases the more segregated the school system is. (See the section on the components of educational disadvantage due to segregation). (2) The decline in the quality of the student body which disadvantages both Negro and white pupils. With the better students moving either to County schools or to private schools, the economically disadvantaged families are the ones whose children will be attending the City School System. They are the Negroes and whites whose socioeconomic status is so low that it prevents

[1]See the section on Educational Disadvantage, p. 25.

escaping from the worsening conditions of city living. The problem is likely to be one of an increasing decline in the level of education for both the Negroes and whites remaining in the City School System. In the previous discussion[1], it was pointed out that Coleman and his associates found that the minority group stood to gain more by improved schools than did the majority. In other words, the majority is less affected by the school than is the minority group. It is probably a more general phenomenon than one relating to disadvantaged Negroes, however, especially in view of the finding relative to the importance of the background and aspirational characteristics of fellow students. What we are saying is that disadvantaged whites - those more likely to remain in the city - stand to lose from the exit of the better students from among whites as well as do the Negroes. That part of our population, both Negro and white, which can ill afford the additional disadvantage of a poor education will be the ones more likely to be exposed to a worsening situation in the city. Desegregation cannot be looked on as a Baltimore City school problem when its consequences are so widespread.

B. Residential Patterns of Segregation

In this section we would like to look at a comparison of neighborhood segregation vs. school segregation. The only available data which we have on neighborhoods are from the 1960 Census, and we have used that to estimate the degree of segregation existing in the neighborhoods for school age children. We have taken the three age categories from Census data which are roughly comparable to school age children: the census tract category of 5-9 years indicating elementary school children; 10-14 years for junior high, and 15-19 years for senior high students. It is not proposed that these data are precise but rather that they will give estimates of neighborhood segregation. Table 17 presents the dissimilarity index for census tract data and for school data.

Table 17

Dissimilarity Index for Neighborhood and School Data
(1960)

	CITY		COUNTY		METRO	
School Age	N*	School	N*	School	N*	School
Elementary	.87	.85	.76	.71	.89	.88
Junior High	.85	.81	.74	.65	.87	.84
Senior High	.83	.76	.73	.80	.85	.78

*N means Neighborhood

Table 17 shows that neighborhood segregation follows the same pattern as school segregation: school age children are more segregated residentially in the City than in the County; the Metropolitan Area is more segregated than either the County or the City alone. The younger the child, the more segregated he is in both his school and his neighborhood.

There are also some interesting data on which of the children's environments is more segregated, that of his neighborhood or of his school. Children are more segregated in their neighborhood than in their

[1]See page 7.

schools. (The one exception to this is in the county at the senior high level which indicates that the school is more segregated than the neighborhood.) As children progress in school, the discrepancy between the degree of segregation in the neighborhood and the school widens, because the school becomes less segregated.

One additonal comment which we can make from an inspection of the data is that the Baltimore City School System might find solace in noting that their progress has been somewhat better than that found in desegregating neighborhoods. Difficult as school desegregation is, it is not as difficult a task as housing desegregation.

The following tables give the percentages of school age children in desegregated neighborhoods and schools, using the criterion of between 10 and 90 percent white to mean desegregated.

Table 18

Percentage of White Baltimore City Students in Desegregated Neighborhoods and Schools

	Segregated White (90-100% White)		Desegregated (11-89% White)	
	N*	School	N*	School
Elementary	83.5%	60.3%	15.0%	38.3%
Junior High	82.0	75.5	17.0	23.7
Senior High	80.7	39.1	18.2	60.9

*N means Neighborhoods (Census tracts)

Table 19

Percentage of Negro Baltimore City Students in Desegregated Neighborhoods and Schools

	Segregated Nonwhite (0-10% White)		Desegregated (11-89% White)	
	N*	School	N*	School
Elementary	69.7%	83.7%	28.9%	15.9%
Junior High	63.2	81.3	35.1	15.7
Senior High	59.6	73.0	38.4	25.8

*N means Neighborhoods (Census tracts)

About one-fourth of Baltimore City's neighborhoods (census tracts) are desegregated (11-89% white); about half are segregated white neighborhoods, and one-fourth segregated Negro neighborhoods.

Whites are more likely at every school-age to be in a segregated neighborhood environment than in a segregated school environment. The

opposite is true of Negroes. They are more likely to be in a desegregated neighborhood than in a desegregated school. However, the overwhelming majority of Baltimore school age children live in neighborhoods which are segregated. But how can whites in the City School System go to more integrated schools, while Negroes go to less integregated schools? The answer, of course, is that the segregated white private schools do not appear in the table. If they did, white segregated schools might be as frequent as white segregated neighborhoods.

What this pattern indicates is that the school system has induced some whites to send their children to integrated schools. They have no influence toward having them live in integrated neighborhoods. The school system has no jurisdiction over the neighborhood pattern of segregation. Yet this residential segregation is a powerful force in determining school segregation. One encouraging point is that white children are found in desegregated schools even though they are mainly in segregated neighborhoods.

Any reasonable solution will have to concentrate on keeping the white children in the city schools and attracting the children of [illegible] in-migrants. The city system must put an all-out effort into upgrading their educational system. It cannot offer an education of less quality than either private or county schools. The recent unfavorable reports[1] which the city system has received must be rectified. They are an added "push" out of the city system of the better students. At this time Negroes need whites in their schools. Negroes, on the average, perform more poorly than do whites because of their accumulated disadva[illegible]ge. There may be a future time in which middle-class Negroes can provide the same stimulus that whites have to provide now. Unfortunately until we give Negroes a better environment to become educated in, there will not be enough middle-class Negroes to do this.

The school can do two things, both having to do with the quality of education in the city system. (1) Concentrate on giving quality education in desegregated schools, the prediction being that quality of education is a more powerful motivator for whites than is sticking to traditional patterns of segregation. (2) Regardless of what whites are in or out of the system, every effort should be put into upgrading the Negro ghetto schools. The first suggestion mainly involves holding on to something that is there, the second one we will discuss below.

One way which the City can help to upgrade the educational facilities for its students is to send more good teachers into the ghetto schools. But provide additional incentives for them to go there. They have a hard task before them. One cannot put mediocre teachers into crowded slum classrooms and the brightest, more energetic teachers into the best school districts and expect to provide the same opportunities for both groups of students. It takes a lot more energy, patience and understanding to deal with disadvantaged children. Therefore the school cannot teach as many of them in a classroom as it can having students more able. At least all school systems have recognized this when making provisions for physically and mentally handicapped classes. Is it not equally important to recognize it for socially disadvantaged children? The same principle applies. In those areas, the teacher has to be challenged-and some would respond to this challenge-but he cannot be overwhelmed by

[1]For example, in the Spring of 1967, the NEA Report received a lot of publicity; it called attention to the ills of the school system. Too little publicity is given to the positives of the system.

the problems and be expected to continue. Faculty assignment problems are burdensome ones, but the policy should perhaps focus on pinpointing those schools in which the pupils are performing below average (either the city or the national) and assigning one teacher for every 15-20 pupils, not one teacher to every class. Some classes would have more than one teacher (or more likely have a teacher and an assistant). This seems a fruitful avenue to explore since not every activity in which a school child engages needs the attention of a trained teacher.

C. "Tipping Point"

One of the most popular ideas about the process of desegregation and resegregation is that there is some "tipping point" of proportion Negro. The idea is that whites will "flee" a school district when the proportion Negro passes a certain point.

A more sophisticated view along the same general lines is that the higher the proportion Negro in an area, the more rapidly the remaining whites will flee. In such a case, there would not be a definite "tipping point." Rather, the higher the proportion Negro, the larger would be the rate of decrease in the number of whites.

In contrast to these two ideas is the idea of demographic pressure, which we have used above. This would predict that no matter what the proportion Negro in a school, the growth of the central city Negro population will push against whatever white spaces there are.

Let us examine these contrasting ideas by the following procedure. First, we classify all schools by the percentage Negro at the beginning of the year. Then we ask the question: For all schools with about a given percentage Negro during one year, what was their average increase in proportion Negro in the following year? A second question we can ask, using the same approach, is: What was the average proportion of whites of the previous year who must have left, for this increase to have taken place? Due to the procedure used here, we can only estimate this last figure. The method of calculation is explained in the Appendix. The results are in Table 20.

First, let us examine the third column. If there were a "tipping point", we should find a place where the numbers in this column suddenly become much larger, indicating that at that point the whites begin to flee. Instead what we find is a low average rate of increase in percentage Negro in the segregated white school 1.62 per cent per year. Then starting with the 10 per cent Negro school, there is an average increase yearly of from 5 to 10 per cent in the proportion Negro. This fluctuates slightly, but apparently in a random fashion. For instance, the highest figure is for the 30 per cent Negro school, which on the average can be expected to be a 40 per cent Negro school the following year (an increase of 9.61 per year in percentage Negro). But one of the lower figures is for the 60 per cent Negro school, which can be expected to be a 66 per cent Negro school the following year (an increase in the third column of 5.63). It hardly makes sense to think of whites fleeing a 30 per cent Negro school more than they flee a 60 per cent Negro school.

On the average, then, once a school is desegregated, it increases about 7 per cent per year in proportion Negro, until it gets to be 90 per cent Negro.

Table 20

Change in School Composition, by Initial Composition, for Baltimore City, 1955-1965

Per Cent Negro (Midpoint)*	Interval*	Average Change in Per Cent Negro/Year	Approximate Net Per Cent of Whites Leaving Per Year	Number of School Years*
5	0-10	1.62	1.71	616
10	5-15	4.57	5.08	164
15	10-20	4 93	5.80	125
20	15-25	5.27	6.59	93
25	20-30	7.99	10.65	72
30	25-35	9.61	13.73	53
35	30-40	9.40	14.46	49
40	35-45	7.26	12.10	52
45	40-50	7.77	14.13	42
50	45-55	8.48	16 96	31
55	50-60	7.01	15.58	42
60	55-65	5.63	14.08	40
65	60-70	7.18	20.51	33
70	65-75	7.71	25.70	38
75	70-80	7.15	28.60	37
80	75-85	6.70	33.50	35
85	80-90	5.52	36.80	33
90	85-95	2.72	27.20	45
95	90-100	.01	**	742

* See Appendix for Exact Explanation

** By the estimating procedure, this gives a meaningless figure (equivalent to division by zero). See Appendix C.

Then, of course, there is no more room for it to become more Negro. This indicates that the pattern is consistent with the idea that resegregation is due to demographic pressures, which push equally on all schools with any appreciable number of Negroes in them.

If we look at the fourth column, a different picture emerges. This column estimates the net percentage of whites who were there in the preceding year, who moved out without being replaced the following year. This shows a steady increase up to the 30 per cent Negro school. After that, it remains near 14 per cent net loss of whites each year until we get to the 60 per cent Negro school. From 60 per cent Negro onwards, there is a steady increase in the net percentage of whites leaving each year, reaching about a third per year in the 80 per cent Negro school.

The overall pattern, in spite of the flat space in the middle, is that the more Negroes there are in the school, the larger the proportion of whites who leave without being replaced. Apparently the psychology of whites runs along the line that "some Negroes in a school is bad, more is worse."

The overall result, then, is that there is no "tipping point." Or rather, the "tipping point" is zero. If there are no Negroes in a school, the whites do not, on a net balance, leave very fast. Once a school is desegregated the proportion Negro is likely to go up each year in a steady fashion, at about 7 per cent per year.

The data are consistent with either of two ideas about the causal forces involved. One idea is that the demographic push of increasing Negro population is about 7 per cent per year, applied about equally to all schools with any Negroes in them. The other idea is that the more Negroes there are in a school, the greater the tendency of whites to flee. Perhaps there is a plateau between 30 and 60 per cent, where about one out of seven whites (net) flee each year.

From a policy point of view, this means that quotas for percentage Negro in desegregated schools are not a rational policy. Wherever the quota point is set, it will tend to be undermined either by demographic pressure of a growing population, or some constant net tendency to flee by whites, or a combination of both.

If the quota could be set throughout the metropolitan school system, so that wherever one went (suburbs or city, public or private), there were 30 percent Negroes, then neither net redistribution nor fleeing would operate. In that case, only the higher birth rates of Negroes would (very gradually) increase the proportion Negro. But the key problem is to set the positive quota of 30 per cent Negro in the suburban and private schools, rather than the negative quota of "no more than" a certain percentage in a given city school.

D. Level of School

In this section we will look at elementary vs. secondary schools. If one observes segregation existing at the different levels (elementary, junior, and senior), then the earlier statements of the overall pattern of segregation continues to hold true for each of these levels: the county and city have both made some small progress in desegregating their schools,

the county more than the city. However, by looking at the progress made in each of the different levels of schools, one begins to pinpoint one cause of segregation: the level of school. The following figures are for Baltimore City Schools.

Table 21

Segregation Index for Baltimore City Schools by Level of School (1955-1965)

	Elementary Schools			Jr. High Schools			Sr. High Schools		
	P[a]	R	D	P[a]	R	D	P[a]	R	D
1955	.53	.46	.94	.29	.37	.91	.42	.47	.97
1956	.57	.44	.90	.33	.34	.79	.42	.44	.92
1957	.59	.42	.88	.36	.36	.79	.42	.41	.85
1958	.63	.40	.87	.38	.37	.78	.42	.38	.79
1959	.65	.39	.87	.41	.40	.83	.43	.38	.77
1960	.68	.36	.85	.46	.40	.81	.43	.37	.76
1961	.69	.35	.84	.51	.39	.78	.44	.35	.72
1962	.71	.35	.85	.55	.39	.79	.44	.35	.72
1963	.71	.34	.84	.61	.37	.79	.46	.35	.70
1964	.72	.35	.85	.63	.37	.80	.49	.33	.67
1965	.74	.33	.86	.67	.35	.81	.52	.33	.66

a. Proportion Negro in system each year at the specified year.

About one third of the students at each level would have to be moved to achieve a racially balanced system. However, if one remembers that in the City there is quite a lot of variation in the Negro to white ratio at the different levels: approximately 1:1 at the secondary level, 2:1 at the junior level, and 3:1 at the elementary level, then we realize that the intensity of the problem varies with the level of the school. For example, to achieve a balanced elementary system in 1965, it would be necessary to move 33,934 students. The means that 22% of the Negro and 63% of the white elementary students in Baltimore would be changed to a different school. We would move 35% of the junior high students: 11,552 movers or 26% of the Negro junior high students and 52% of the white students. If we look at the senior high for 1965, we see that one third of the students would be moved: 11,152 total (half of the movers from each race). And these would be 32% of the senior high Negroes and 32% of the whites in the Baltimore system. In sum, the ratio of Negro to white movers is the same as the ratio of white to Negro students at the particular level of a school.

This finding of variation in the degree of segregation according to the level of school is probably not a surprising one, especially when we take into consideration the demographic trends discussed earlier. Elementary schools are neighborhood schools and serve a much smaller unit than do secondary schools. We therefore would expect them to reflect the racial composition of the immediate neighborhood rather than the more heterogeneous combination of several neighborhoods.

There has not been the tremendous influx of Negroes at the secondary level that has been true of the elementary level, even though the secondary schools have experienced an increase in the percentages of Negroes. This increased proportion has added to the complexity of desegregating elementary schools.

The above section clearly indicates that the segregation problem is more acute at the elementary level than it is at the secondary level. Any solution to the problem will have to be one that concentrates on desegregation of the elementary level. There are two complicating factors in any attempt at desegregating elementary schools: (1) The school has no control over external forces impinging upon segregation in the school. One of the most potent of such external forces is that of housing segregation. The school has no power to change residential patterns for either Negroes or whites; yet this force crucially affects the degree of segregation in the schools. (2) There are more difficulties inherent in moving young children out of neighborhood schools.

Desegregation in the elementary school will at best be only token desegregation unless white parents send their children to city public schools. The trend is away from doing so. There have been several proposed solutions for desegregating schools in the central city. One that has received a lot of attention is that of building an educational park to which all school children will go - a kind of massive educational complex which would do away with neighborhood schools. There are several serious considerations to accepting such a proposal - and we are now assuming that citizens seriously wish to solve segregation problems. First of all, there would have to be a safe and rapid transportation system to accompany such an educational park. Few parents would wish to have their young children spend a long time travelling back and forth to school, and the present system of transportation would be unusable in such a set-up. Those people - again Negroes and whites - who are the most disadvantaged and on whom any desegregation report must focus - would be least able to afford either the money or the child's time that would be necessary under such a system. Quite a few of these families depend upon their school-age children to help at home, to look after younger children while the parents work, and so forth. The conclusion seems to be that the disadvantaged group cannot afford such a system nor would the better families of whites be enthusiastic about such an educational park for their children.

Such an educational park assumes that money would be available for the venture. Even so, it still takes time. And the desegregation problem cannot wait for entanglement in redtape that such a project would encounter. Such a system would work only if it could reach the white County students. Otherwise, we would be suggesting a system which would do nothing more than take the Negroes out of neighborhood schools and send them to an educational park where they would go to school with Negroes. The most merit, in our opinion, is that an educational park is a long-range goal to be considered for a Metropolitan solution. In the meantime, all promising short-range goals should be pursued.

There are more difficulties in shifting elementary children to schools outside their neighborhoods. Parents object. First of all, white parents will stand up in great protest at the thoughts of bussing their children out of a better neighborhood school to a ghetto school in order to solve segregation problems. At least that is what happened in New York. Our society endorses, verbally anyway, equality for all citizens. It also places education as one of the most important items in its value system. It probably assumes even more importance for parents when it is their own children's education. Under the proposed solution of reassigning children, conflict is created in many parents. For the white it is his commitment to equality of opportunity vs. his commitment to giving his children the best possible education. So perhaps

this solution looks easy on paper; it is much more difficult in reality. It would only intensify the segregation problem in the long run because white parents will hasten to take their children out of the city public schools and into the county or private schools.

E. School Policy

The statistics above illuminate the degree to which segregation patterns can be affected by the policy of the City School System as presently constituted. That is, the City system does not now legally have the power to mix its students with private school or suburban students. If we assume that these legal limitations will remain, how effective can City School policy be in achieving progress in integration?

The first crucial fact is the result of the analysis of Table 7 in the Patterns of Change in Schools. The rate of desegregation activity by the school system was almost the same in the 1960-65 period as it had been in 1955-59. About the same number of schools were desegregated per year (out of a smaller pool of segregated white schools). Further, three out of the four transitions from segregated Negro schools to desegregated schools were carried out from 1963-65. In spite of this same level of activity on the part of the school system, the net effect was no desegregation. This is because resegregating forces grew to equal the effect of school policy.

Now the question is whether any school policies might be able to decrease the rate of desegregation. As we have argued above, this is a question of the net migration into desegregated school districts. The crucial point in the determination of net migration is whether whites, as well as Negroes, move into desegregated areas.

We might suggest that one factor in this failure to in-migrate into neighborhoods with desegregated schools is a stereotype which rates schools from "good" to "bad" according to the proportion Negro. This stereotype is especially strong among real estate dealers, who usually know nothing else about schools except the proportion Negro. The question, then, is how the school system might break into the realtor-client communication system to get accurate information into the hands of prospective in-migrants of both races. We might suggest exploration of the following alternatives, any of which should have a positive effect in these desegregated areas where there are good schools:

1. Extend invitations to all realtors to bring prospective clients to the neighborhood school.

2. Provision of photographs, information, and invitations to visit schools, in a kit for each school, to realtors. These kits could be passed out to prospective clients by the realtor. First priority for such kits should go to desegregated schools.

3. The organization of committees of the PTA in desegregated schools, who would survey the neighborhood for "For Sale" or "For Rent" signs. They could then place invitations to visit the school and talk to the Principal, giving the appropriate school numbers and addresses, on the doorknobs of every such house on the market. They could call the realtor to invite such visits.

4. An attractive and informative brochure, with photographs and comments by parents, might be printed called something like "Baltimore's Desegregated Schools." Selecting six or eight fairly stably desegregated schools, a pictorial essay could be written emphasizing their quality. The proportion of students entering college preparatory high school curricula from elementary and junior high schools is perhaps the most influential measure of quality for such people. A list of presently desegregated schools (using some reasonable criterion of "desegregated" from the point of view of in-migrating whites) might be appended for those attracted to desegregated situations.

5. Perhaps some of the local newspapers might be interested in preparing such a pictorial essay for publication in the Sunday edition. This might hit the public of migrants within the metropolitan area quite effectively.

6. Data on the proportion of students in these desegregated schools entering college preparatory courses (for elementary and junior high schools) and entering college (for senior high schools) might be disseminated each year. In the absence of information on how good a school is, we can expect that prejudice will form a basis for judgment. The information will, of course, discourage some people if it indicates a poor school for ambitious parents. But then it should.

7. Some combination of the above efforts might be directed toward a few desegregated schools in the first year of the program, as a pilot project.

8. The City system might take a strong position on opening up the suburbs and private schools to more Negroes.[1] Perhaps the school system itself is not the vehicle for such activity, but they are surely a very interested party to it.

The results of this study have broader implications than for the Baltimore Metropolitan Area in two respects. First, the method of analysis itself can readily be applied by other school systems which routinely maintain similar racial data. To facilitate this, the computer programs used for the analysis will be made available upon request.[2]

Secondly, the findings for the Baltimore Metropolitan Area are generalizable to other large urban areas having similar demographic characteristics. Differences in the degree of influence of such factors as private and parochial schools and local political boundaries on desegregation patterns will, of course, vary. Each school system will have to be studied to determine these specifics. However, the broad pattern of desegregation described in this report should hold true for other large urban areas.

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[1]There has been some successful cooperation between cities and suburbs which placed Negro central-city pupils in suburban school systems. This has been the case in Hartford, Conn., Boston, Mass. and Rochester, N.Y.

[2]These programs and write-ups for the IBM 7094 computer are available from the Hopkins Center.

APPENDIX A

Calculation of Replacement Index

The following is an explanation of the construction of the replacement index along with a hypothetical example to illustrate its computation:

School	N_i Negro (a)	W_i White (b)	Students (Total) (c)	$\frac{N_i+W_i}{N_T+W_T}$ (d)
1	30	500	(530)	.22
2	20	100	(120)	.05
3	150	150	(300)	.12
4	400	150	(550)	.23
5	800	100	(900)	.38
	1400	1000		

Our first constraint is that for each school, column "c" will remain the same after we have achieved a racial balance through our replacement procedure.

STEP 1: $\frac{N_i+W_i}{N_T+W_T}$ where N_i = # of Negroes in School i

W_i = # of Whites in School i

N_T = # of Negroes in All Schools (K schools) in the System

W_T = # of Whites in All Schools (K schools) in the System

Step 1 gives the proportion of all students in the system which are in school i. In our example, it is column "d"; this is the proportion of Negroes and the proportion of whites which the school should have to be racially balanced.

STEP 2: Since the procedure used replaces a student of one race with a student of another, it is necessary to look at only one race in order to find the total # of movers. We arbitrarily select a race: the whites.

$\frac{W_i}{W_T}$ indicates the proportion of whites in School i. The difference between that and the proportion necessary to achieve integration (found in step 1) will be the proportion whites which need to be moved:

School	(d)	$\frac{W_i}{W_T}$ (e)	(f)
1	.22	.50	.28
2	.05	.10	.05
3	.12	.15	.03
4	.23	.15	.08
5	.38	.10	.28
			.72

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STEP 3: If the above proportion is multiplied by W_T, then the number of movers can be divided by the total population to give the proportion of movers:

$$\frac{(.72)\ (1000)}{N_T + W_T} = \frac{720}{2400} = .30$$

The replacement index is

$$R = \frac{\left(\sum_{i=1}^{k} \frac{N_i+W_i}{N_T+W_T} - \frac{W_i}{W_T} \right) W_T}{N_T+W_T}$$

The dissimilarity index is

$$D = 1/2 \sum_{i=1}^{k} \frac{N_i}{N} - \frac{W_i}{W}$$

The relationship between D and R is:

R = 2D X (proportion of whites in total population) X
(proportion of Negroes in total population)

APPENDIX B

The Calculation of Estimated Educational Disadvantage

The national study of equality of educational opportunity found that the achievement of Negro students was directly related to the proportion of white students in their schools. The larger proportion white, the higher Negro verbal and mathematical achievement. This finding holds when family background factors are statistically controlled.[1]

From these findings on a national scale, we can extract an estimate of the effects of proportions of white on Negro students' verbal ability scores, controlling for family background. The estimates in Tables 15 and 16 assume that what holds nationally also holds in Baltimore.

Equation (1) below gives the results of this national study for the effects of proportion white on Negro student's verbal ability score, controlled for family background factors.

$$\hat{y} = -.61 - .57\ Pn, \quad \text{where } y = \text{score of Negro students on a verbal ability test, measured in standard deviations from the white mean ability level} \qquad (1)$$

Pn = proportion Negro in the school to which the student goes

Thus if he goes to an all-Negro school, Pn would be 1.0, and his verbal achievement would be

$$-.61 - .57(1.0) = 1.18 \text{ standard deviations from the white mean.}$$

If he went to an all-white school (except for himself, of course), Pn would be about 0.0, and his verbal ability score would be, on the average

$$-.61 - .57\ (0.0) = .61 \text{ standard deviations from the white mean.}$$

Note that item (1) in both Tables 15 and 16 is equal to .61, the educational deficit of Negroes in all-white schools.

By taking $e = -y$ = the educational deficit of Negroes, we have

$$\hat{e} = .61 + .57\ Pn \qquad (2)$$

Now if we take a particular individual, i, we can say that his expected educational deficit, e_i, will equal

$$\hat{e}_i = .61 + .57\ Pni, \quad \text{where } P_{ni} = \text{the proportion white in his school} \qquad (3)$$

We can now write P_{ni} as a sum of terms of proportions Negro at different levels in the overall system, corresponding to segregation at different levels, as described in Section V. That is,

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[1]James McPartland provided the authors with the results from the Coleman, op. cit., study in the form needed to estimate the educational disadvantage. They are for ninth grade Negroes in the North.

$$p_{ni} = P_N + (P_M - P_N) + (P_{cc} - P_M) + (P_{cs} - P_{cc}) + (p_{ni} - P_{cs}) \quad (4)$$

where:

P_N = National proportion Negro among school age children

P_M = Metropolitan proportion Negro among school age children

P_{cc} = City Census proportion Negro among school age children

P_{cs} = City School proportion Negro among enrolled students

p_{ni} = proportion Negro in i's particular school

Note that each of the capital P's is added once and subtracted once, so only small p_{ni} remains on the right after elimination.

The advantage of writing p_{ni} the way we have on the right in equation (4) is that when we substitute back into equation (3), we break down i's educational disadvantage into components due to different levels of segregation.

$$e_i = .61 + .57\,(P_N + (P_M - P_N) + (P_{cc} - P_M) + P_{cs} - P_{cc}) + (p_{ni} - P_{cs}) =$$

$$\overset{(1)}{.61} + \overset{(2)}{.57}\,P_N + \overset{(4)}{.57(P_M - P_N)} + \overset{(6)}{.57(P_{cc} - P_M)} + \overset{(7)}{.57(P_{cs} - P_{cc})} + \overset{(8)}{.57(p_{ni} - P_{cs})} \quad (5)$$

The numbers in parentheses correspond to the items in Tables 15 and 16. That is, $.57(P_M - P_N)$, for instance is the effect on individual i of living in his metropolitan area - the amount that he is worse off because of living in Baltimore instead of in a society where all metropolitan areas have exactly the same proportion Negro, P_N.

Now we want to estimate the average expected educational disadvantage for all the Negro students in the city. Negro students go to different schools, with different proportions Negro, so we need an average. We can therefore add up all the e_i, the estimated educational disadvantage for each individual, and divide by N, the total number of Negro students. This gives, after some algebraic manipulation,

$$\bar{e} = \frac{\sum_{i=1}^{N} e_i}{N} = \overset{(1)}{.61} + \overset{(2)}{.57}\,P_N + \overset{(4)}{.57}\,(P_M - P_N) + \overset{(6)}{.57}\,(P_{cc} - P_M) + \overset{(7)}{.57}\,(P_{cs} - P_{cc}) +$$

$$\overset{(8)}{.57\sum_{i=1}^{K} n_i\,(p_i - P_{cs})}. \quad (6)$$

Since all of the terms in equation (5) except the last are the same for all students in the City, their average is the same as it is for each individual. Only the last term is different for different Negro students in the City. But it is the same for all students in a particular school. We have written the last term then, in terms of schools, rather than individuals. For each of the K schools, we multiply its number of Negro students, n_i, by the proportion Negro in that school, minus the proportion Negro in the public school system. The numbers in parentheses above the terms in equation (6) again correspond to the items in Tables 15 and 16.

For the actual calculations, P_N, P_M, P_{cc} were all obtained from the proportion Negro in the 5-19 age group in the 1960 census. P_N is the proportion nationally of that age group Negro in 1960, P_M the proportion Negro in that age group in the total 5-19 population of Baltimore City and Baltimore County, P_{cc} the proportion of 5-19 year olds who were Negro in in the City in 1960. P_{cs} and p_i were obtained from school records on the on the number of Negroes and whites in each school in Baltimore City and County for 1965. The disparity in dates very slightly exaggerates item (7) in both Table 15 and Table 16.

APPENDIX C

Calculation of "Tipping Point"

The basic idea of the analysis of tipping points is that of the moving average. This technique is much used in the economic analysis of time series.

Suppose that we want to estimate how much the percentage Negro increases during a year, in schools that start at 5 per cent Negro. Looking at the Baltimore City data, we find that there are only 17 schools which, during some year, started the year with between 4 and 5 per cent Negro. This is quite an unstable basis for estimating what happens in this area. (It gets worse at other percentages. For instance, there was only one school during one year which had between 52 and 53 per cent Negro.)

In order to get a more stable estimate of what goes on in the general region of 5 per cent Negro, we can take an average of all schools "near" 5 per cent Negro. In this analysis, we have chosen to consider all schools falling 5 per cent on either side of a given percentage Negro as being "near" that percentage.

Hence what we do is the following. We have the computer locate all schools which in a given year, fell between 0 and 10 percent Negro. Then we go on to the next year, and locate all schools falling in the interval between 0 and 10 per cent (some of them, of course, will be the same schools). We continue this for all the years for which we have data. For all these "school years" (the number given in the last column of Table 20) which began with from 0 to 10 per cent Negro, we calculate the percentage change Negro from that year to the next. Then we compute the average of all these percentage changes. This is the number reported in column 3 of Table 20.

In order to estimate approximately the net percentage of all whites who had to leave, for the school to increase as much as it did in percentage Negro, we assumed that the number of students did not increase during the year. Probably most schools become more crowded as the proportion of Negroes increases, but we ignored this in our rough calculations. With this assumption, we can estimate the net percentage of whites leaving per year by the ratio

$$F = \frac{\text{Percentage increase in Negroes} \times 100}{\text{Estimated percentage white (midpoint) at beginning.}} \qquad (1)$$

This is because, with the assumption, the percentage increase in Negroes equals the percentage of the total school who would be whites leaving. Hence

$$F = \frac{\frac{\text{Whites leaving}}{\text{Total School}} \times 100 \times 100}{\frac{\text{Whites at beginning}}{\text{Total School}} \times 100} = \frac{\text{Whites leaving} \times 100}{\text{Whites at beginning}}$$

When the percentage of whites at the beginning is very small (less than 10 per cent, say), this estimate is essentially the same as dividing by zero. In order to estimate the percentage of whites who leave from dominantly Negro schools, we would have to use a different form of calculation. Since there are so few of them, and since they have little effect on overall segregation patterns, we have not done this calculation.